

## ABSTRACT

The present invention relates to a method for generating an 2-D projection directly from a 3-D volume data, the method comprising the steps of determining a viewing direction vector in a viewing frustum, determining a major axis of the direction vector, resampling the volume data in the direction of the major axis, applying a shear factorization to the resampled data; and rendering the factorized data. The method provides a singularly warped image which avoids have to patch images from multiple warp functions which, in turn, improves the quality of the final image. Finally, the image allows a scene to be rendered from within the scene itself. The invention can be applied to medical imaging and enable a surgeon to view an image such as a CT scan with perspective as well as from within the scan itself, providing the surgeon with an invaluable tool.